HHRA SF

Program Project Description:

The EPA's Human Health Risk Assessment (HHRA) research program supports the risk assessment needs of the agency's Superfund programs and regional risk assessors by providing Provisional Peer-Reviewed Toxicity Values (PPRTVs), rapid risk assessments to respond to emergent scenarios, and technical guidance on their application. These assessment tools and activities support risk-based management decisions at contaminated Superfund and hazardous waste sites. PPRTVs are provided in addition to the HHRA Integrated Risk Information System (IRIS) assessment products.

Scientists in the HHRA program synthesize the available scientific information on the potential health and environmental impacts of exposures to individual chemicals and chemical mixtures that are in the environment to assist in the agency's chemical safety work. Implications include:

- improvements in environmental and human health in the vicinity of Superfund sites;
- reduction or reversal of damages to natural resources;
- reduction of harm in emergency situations;
- improved economic conditions and quality of life in communities affected by hazardous waste sites;
- improved environmental practices by industry; and
- advances in science and technology.

Priorities for PPRTV development are based on the needs of the EPA's Office of Land and Emergency Management (OLEM) and are evaluated annually. Applying new data streams, read-across approaches, and computational tools to enhance the supporting data/knowledge bases and efficiency of derivation for PPRTV values is an active area of research in the HHRA program. Lessons learned will be leveraged and applied to other assessments in support of TSCA implementation.

Communities near Superfund sites or in emergent situations also are faced with an urgent need for coordinated assistance to assess and address issues of chemical and other environmental contamination. Additionally, they are now presented with new sensing or monitoring information that is difficult to interpret. The HHRA program develops approaches to respond to these emerging, often crisis-level, chemical/substance issues with scientific information that supports quick action, decisions and effective solutions. The HHRA program anticipates developing new assessment approaches by means of an expanded product line to enhance rapid response and screening capabilities and to augment toxicity value derivation procedures for health assessments.

Recent accomplishments include:

- Completed 12 Provisional Peer-reviewed Toxicity Value (PPRTV) documents based on needs and priorities of the EPA's Superfund program.
- Fielded more than 40 requests for scientific support on human and ecological assessment via

the Superfund Health Risk Technical Support Center (STSC) and Ecological Risk Assessment Support Center (ERASC).
- Provided modeling support to estimate blood lead levels from multiple routes of exposure to support decisions on the Lead and Copper Rule for the Office of Water.

FY 2019 Activities and Performance Plan:
The HHRA program's work in FY 2019 will focus explicitly on efforts integral to achieving the Administrator's priorities and informing the Agency's implementation of key environmental regulations. Examples of this work include:

- Assessments that support policy and regulatory decisions for EPA's programs and regions, and state agencies, will be consolidated into a portfolio of *Chemical Evaluation* products that optimize the application of best available science and technology. These tailored 'fit-for-purpose' products will be shaped for use by partners, including the EPA's Program and Regional Offices, states, and other federal agencies.

- HHRA will continue to collaborate with the Chemical Safety for Sustainability (CSS) research program to link the architecture of assessment databases and literature management tools, including *Health and Environmental Research Online* (HERO), with the RapidTox Dashboard being developed by NCCT in CSS. This integration can be used to inform assessment development and fill gaps in assessments, especially for data poor chemicals.

- Provide additional Provisional Peer-reviewed Toxicity Values (PPRTV) assessments as prioritized by the Office of Land Emergency Management (OLEM) to support risk-based decision making at Superfund sites and hazardous waste sites, as resources allow. This work improves the EPA's ability to make decisions and address site related environmental health problems.

- Continue essential technical assistance across the EPA to provide rapid risk assessments as resources allow. This will combine problem formulation and state-of-the-art exposure information and tools with hazard information, chiefly through the continued improvement of the derivation basis for PPRTVs for evaluating chemical specific exposures at Superfund sites, and by evaluating case-specific information related to emergent situations.

The EPA has established a standing subcommittee under the EPA's Board of Scientific Counselors (BOSC) for the Chemical Safety for Sustainability and Human Health Risk Assessment National Research Programs that will be utilized to evaluate the HHRA program as part of its performance and provide feedback to the agency. The EPA will meet regularly with both the BOSC and Science Advisory Board (SAB) to seek their input on topics related to research program design, science quality, innovation, relevance and impact. This includes advising the EPA on developing its strategic research direction and Strategic Research Action Plans for FY 19-22.

The EPA collaborates with several science agencies and the research community to assess our research performance. For instance, the EPA is partnering with the National Institutes of Health, the National Science Foundation, the DOE, and the USDA. The agency also will work with the

White House's Office of Science and Technology Policy. The EPA supports the interagency Science and Technology in America's Reinvestment—Measuring the Effect of Research on Innovation, Competitiveness and Science (STAR METRICS) effort. This interagency effort is helping the EPA to more effectively measure the impact federal science investments have on society, the environment, and the economy.[1]

A list of FY 2019 performance measures and targets is located in the FY 2019 Performance Measures tab.

FY 2019 Change from FY 2018 President's Budget (Dollars in Thousands):

- (+/-) This change to fixed and other costs is and increase/decrease due to the recalculation of base workforce costs for existing FTE due to adjustments in salary, essential workforce support, and benefit costs.

Statutory Authority:

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); Clean Air Act (CAA) §§ 103, 108, 109, 112; Clean Water Act (CWA) §§ 101(a)(6), 104, 105; Federal Insecticide Fungicide and Rodenticide Act (FIFRA) § 3(c)(2)(A); Food Quality Protection Act (FQPA); Safe Drinking Water Act (SDWA); Toxic Substances Control Act (TSCA), §§ 4(b)(1)(B), 4(b)(2)(B).